Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 - 4. (Canceled)

5. (Previously Presented) An optical transmitter to output an optical packet composed of a header and data, comprising:

a frequency divider to generate a second clock which synchronizes with a first clock carrying the data and has a frequency 1/N one integer of that of the first clock, wherein N is an integer greater than one;

a phase modulator to modulate a phase of the second clock by the header information; and

a data arranger to arrange the first clock carrying the data after the output data from the phase modulator.

6. (Original) The optical transmitter of claim 5 further comprising a converter to convert the output data from the data arranger into an optical signal.

7. (Previously Presented) An optical transmission method to output an optical packet composed of a header and data, comprising steps of:

generating a second clock which synchronizes with a first clock carrying the data and has a frequency equal to 1/N of that of the first clock, wherein N is an integer greater than one;

modulating a phase of the second clock with the header information; and

arranging the first clock which carries the data after the phase-modulated second clock.

8. (Original) The optical transmission method of claim 7 further comprising a step of converting the phase-modulated second clock and the following first clock carrying the data into an optical signal.

9. - 14. (Canceled)

15. (Previously Presented) A packet generator, which generates a packet comprising a header and data, the packet generator comprising:

a first clock circuit that produces a first clock;

a frequency divider that generates a second clock, synchronized with the first clock, having a frequency equal to a frequency of the first clock divided by an integer greater than one;

a phase modulator that creates a modulated header by phase modulating the second clock with the header; and

a data arranger that arranges the data within the packet after the header.

16. (Previously Presented) The packet generator of claim 15 further comprising a converter that converts the packet into an optical signal.

17. (Previously Presented) A data transmission method, that provides a packet comprising a header and data, the method comprising:

providing a first clock;

modulating the first clock with the data to produce modulated data;

generating a second clock by dividing the first clock by an integer greater than one;

phase modulating the second clock with the header information to provide header data; and

arranging the packet such that the header data is transmitted before the modulated data.

18. (Previously Presented) The method of claim 17 further comprising converting the packet into an optical signal.

19. - 20. (Cancelled)